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APPARATUS FOR SHAPING THE RADIATION PATTERN
OF A PLANAR ANTENNA NEAR-FIELD RADAR SYSTEM

Abstract of the Disclosure

A near-field radar apparatus includes a fixed beam planar radar antenna and a radiation pattern adaptation device disposed substantially at the near-field boundary of the antenna. The adaptation device comprises a plurality of
5 dielectric elements that individually constitute or approximate different surface portions of an idealized quasi-spherical or quasi-cylindrical radome reflector. The dielectric elements can be maintained physically separate or combined about the diffraction point of the antenna to form a single dielectric element. The dielectric elements may be mounted on a radome that is otherwise
10 transparent to the radiation pattern, or otherwise suspended at or near the near-field boundary of the antenna.